

a charge/discharge unit connected to the power system and to said secondary battery; and

a signal line for transmitting information about said secondary battery through said detecting device to said charge/discharge unit, wherein said charge/discharge unit controls charging and discharging of the secondary battery on the basis of said information, and wherein said information comprises measured values for determining residual electric power stored in the secondary battery.

REMARKS

Claim 34 is hereby added so that claims 1-3, 5, 7-16, 18-23, and 25-34 are pending in the application.

Regarding the rejection of the invention under 35 U.S.C. §102(b), as being anticipated by Yang, the invention as claimed in claim 34 is novel. Specifically, the rejection is that "Yang discloses an intermediate storage battery charging system comprising: a secondary battery (103), connected to loads (105-1...n), a control device (107) . . . , rectifier (102) . . . , [and] a control scheme for control device (107)"¹ This rejection is respectfully traversed as it applies to claim 34.

In response, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."² Claim 34 recites "a signal line for transmitting information about said secondary battery through said detecting device to said charge/discharge unit, wherein said charge/discharge unit controls charging and discharging of the secondary battery on the basis of said information, and wherein said information comprises measured values for determining residual electric power stored in the secondary battery."³

As noted in the Response to Office Action filed on January 8, 1997, the timing device of Yang is dissimilar from the detecting device as claimed because the timing

¹ Office Action mailed October 1, 1996 at 4-5.

² *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).

³ Support for this claims is found generally in the specification at page 23, lines 6-18. Specifically, the specification teaches that "a controller 7 [is] included in the charge/discharge unit 2." Spec at page 23, line 17.

device merely estimates the residual charge by timing the duration of charging. Alternatively, the detecting device a uses measured values which represent current, voltage and temperature data⁴ to accurately determine the residual electrical energy in the secondary battery.

Further, Yang fails to teach or suggest a "charge/discharge unit [which] controls charging and discharging of the secondary battery on the basis of said information" as claimed. In Yang, a "cyclic timing device 107 controls the application of AC source 101 to rectifier 102 and relay battery 103 . . ."⁵ "Cyclic timing control device also senses the residual electrical energy already stored in intermediate storage battery 103 and controls *charging* in accordance" with the residual electric energy and the present time relative to the charge cycle.⁶ Discharging, however, is accomplished by opening individual output control devices 104-1 . . . n.⁷ The timing control device has no control over the output control devices. Thus, the timing control device does not have the ability to control discharging like the charge/discharge unit as claimed in claim 34.

Therefore, the present invention as claimed in claim 34 is patentable.

Respectfully submitted,

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William Beard

R. William Beard, Jr.
Reg. No.: 39,309
BARDEHLE & PARTNERS
Three Riverway, Suite 500
Houston, Texas 77056
Telephone: (713) 621-0703
Telefax: (713) 622-1624
ATTORNEY FOR APPLICANT

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⁴ See Specification at page 26, lines 15-31.

⁵ Yang at col. 2, lines 20-22.

⁶ Yang at col. 3, lines 18-39 (emphasis added).

⁷ Yang at col. 2, lines 34-43.